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A2 - Notice of Preparation (NOP)

A3 - Notice of Availability of the Draft EIR

B - Oil Spill Modeling

B1 - Results from Unocal Spill Modeling Applicable to the Shell Marine Terminal

B2 - Sensitive Resources and Spill Model and Trajectory Analysis from Shore Terminals Oil Spill Response Plan, March 2001 (Reproduced from Shore Terminals LLC DEIR, May 2004)

B3 - Clean Bay Trajectory Analysis Contained in Wickland Oil Martinez Application Responses and Supporting Appendices, September 17, 1998 (Reproduced from Shore Terminals LLC DEIR, May 2004)

C - Fisheries

C1 - San Francisco Bay Commercial and Charter Boat Landings

D - Test of Language from CSLC, "The Key Components of the Law, Effective January 1, 2000 – California's Ballast Water Management Program" and Additional Ballast Water References

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LIST OF ABBREVIATIONS/ACRONYMS AND FREQUENTLY USED TERMS

UNITS OF MEASUREMENT

^{o}C	degrees Celsius
^{o}F	degrees Fahrenheit
bbl	barrel (= 42 gallons)
bpd	barrels per day
bph	barrels per hour
bpy	barrels per year
Btu	British thermal unit
cfu	coliform forming unit
cm	centimeter
cm/s	centimeter per second
dB	decibel
dBA	decibel on A-weighted Scale
DWT	deadweight ton/deadweight tonnage
g/hp/hr	emissions per horsepower per hour
gal	gallon
hp	horsepower
hp/hr	horsepower/hour (power demand)
kg	kilogram
km	kilometer
knot	nautical mile per hour
L/T	Long Tons
lb/gal	pounds per gallon
lb/hp/hr	pounds per horsepower per hour
L_{dn}	day-night average noise level
L_{eq}	equivalent continuous sound level
L_{max}	maximum noise level
L_{min}	minimum noise level
m	meter
mcy	million cubic yards
mg/kg	milligrams per kilogram
mg/L	milligrams per liter (parts per thousand)
mg/m^3	milligrams per cubic meter
mgd	million gallons per day
ml	milliliter
mm	millimeter
mm/yr	millimeters per year
MT	metric tons
ng/L	nanograms per liter (parts per trillion)
nm	nautical mile
ntu	nephelometric turbidity unit
pg/kg	picograms per kilogram
pg/L	picograms per liter (parts per quadrillion)
pm	picometer
ppb	parts per billion
ppm	parts per million
ppt	parts per thousand
psi	pounds per square inch
psig	pounds per square inch gauge
psu	practical salinity units
TUc	chronic toxic unit
ug/kg	micrograms per kilogram
ug/L	micrograms per liter
ug/m^3	micrograms per cubic meter

OTHER ABBREVIATIONS & ACRONYMS

A	AAS	Allision Avoidance System
	AB	Assembly Bill
	ACP	Area Contingency Plan
	ADT	Average Daily Traffic
	Ag	Silver
	AIChE	American Institute of Chemical Engineers
	ANS	Alaskan North Slope
	ANSI	American National Standards Institute
	As	Arsenic
	ATC	Authority to Construct

B	BAAQMD	Bay Area Air Quality Management District
	BACT	Best Available Control Technology
	BARCT	Best Available Retrofit Control Technology
	BCDC	Bay Conservation and Development Commission
	BIA	Bureau of Indian Affairs
	BMP	Best Management Practice
	BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
	BRAC	Base Realignment and Closure Act
C	CAA	Clean Air Act
	CAAQS	California Ambient Air Quality Standards
	Cal EPA	California Environmental Protection Agency
	Cal/OSHA	California Office of Safety and Health Administration
	Caltrans	California Department of Transportation
	CAP	Clean Air Plan
	CARB	California Air Resources Board
	CARE	Community Air Risk Evaluation
	CBC	California Building Code
	CBI	Clean Bay Inc.
	CCAA	California Clean Air Act
	CCC	California Coastal Commission
	CCR	California Code of Regulations
	Cd	Cadmium
	CDFG	California Department of Fish and Game
	CDHS	California Department of Health Services
	CDMG	California Division of Mines and Geology
	CEQA	California Environmental Quality Act
	CFR	Code of Federal Regulations
	CGS	California Geological Survey
	CNDDB	California Natural Diversity Database
	CNEL	Community Noise Equivalent Level
	CNPS	California Native Plant Society
	CO	Carbon Monoxide
	CO_2	Carbon Dioxide
	COAs	Certificates of Adequacy
	COLREGS	International Regulations for Preventing Collisions at Sea
	CPFV	Commercial Passenger Fishing Vessel
	CPUC	California Public Utilities Commission
	Cr	Chromium
	CRHR	California Register of Historical Resources
	CSFM	California State Fire Marshal
	CSLC	California State Lands Commission
	Cu	Copper
	CWA	Clean Water Act
	CZARA	Coastal Zone Act Reauthorization Amendments of 1990

D	dba	Doing business as
	DDE	Dichlorodichlorophenylethylene
	DDT	Dichlorodiphenyltrichloroethane
	DMMO	Dredged Material Management Office
	DOD	U.S. Department of Defense
	DOI	U.S. Department of the Interior
	DOT	U.S. Department of Transportation
	DWR	California Department of Water Resources
	DWTL	Deep Water Traffic Lane
E	EBRPD	East Bay Regional Parks District
	EEZ	Exclusive Economic Zone
	EFH	Essential Fish Habitat
	EIR	Environmental Impact Report
	EIS	Environmental Impact Statement
	EPA	U.S. Environmental Protection Agency
	ER-L	Effects Range Low
	ER-M	Effects Range Median
	ESU	Evolutionarily Significant Unit
	ETP	Effluent Treatment Plant
F	FCMA	Fishery Conservation and Management Act
	FHWA	Federal Highway Administration
	FMP	Fishery Management Plan
	FMWT	Fall Mid-Water Trawl Program
	FRA	Federal Railroad Administration
G	GHG	Greenhouse Gas
	GRR	General Reevaluation Report
	GTC	Gaviota Terminal Company
H	HC	Hydrocarbons
	HCB	Hexachlorobenzene
	HCH	Hexachlorocyclohexane
	Hg	Mercury
	HOE	Human Occupational Errors
	HWRP	Hamilton Army Airfield Wetlands Restoration Project
I	IEC	International Electrotechnical Commission
	IGS	Inert Gas System
	IMO	International Maritime Organization
	IPCC	Intergovernmental Panel on Climate Change
	ISM Code	International Ship Management Code
L	LLC	Limited Liability Company
	LOOP	Louisiana Offshore Oil Port
	LOS	Level of Service
	LTMS	Long-Term Management Strategy
M	MARPOL	Marine Pollution
	MARPOL 73/78	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
	MCEs	Maximum Credible Events

	MFD	Marine Facilities Division (of California State Lands Commission)
	MHEA	Middle Harbor Enhancement Area
	MHHW	Mean Higher High Water
	MISA	Marine Invasive Species Act
	MLLW	Mean Lower Low Water
	MM	Mitigation Measure
	MMP	Mitigation Monitoring Program
	MMRCP	Mitigation Monitoring, Compliance and Reporting Program
	MOT	Marine Oil Terminal
	MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards
	MOU	Memorandum of Understanding
	MPA	Marine Preservation Association
	MPRSA	Marine Protection, Research, and Sanctuaries Act
	MSC	Military Sealift Command
	MSL	Mean Sea Level
	MSRC	Marine Spill Response Corporation
	$MTCO_2e$	Metric tons of carbon dioxide equivalent ($MTCO_2e$)
	MTC	Metropolitan Transportation Commission
	MVR	Marine Vapor Recovery
	Mw	Moment Magnitude
	MWRP	Montezuma Wetlands Restoration Project
N	NAAQS	National Ambient Air Quality Standards
	NAS	Nonindigenous Aquatic Species
	NEPA	National Environmental Policy Act
	NFD	Naval Fuel Depot
	Ni	Nickel
	NMFS	National Marine Fisheries Service
	NMHC	Non-methane Hydrocarbons
	NO	Nitric Oxide
	NO_2	Nitrogen Dioxide
	NOAA	National Oceanic and Atmospheric Administration
	NOD	Notice of Determination
	NOP	Notice of Preparation
	NOS	National Ocean Service
	NO_X	Nitrogen Oxides
	NPDES	National Pollutant Discharge Elimination System
	NRC	National Response Center
	NRDA	Natural Resource Damage Assessment
	NRHP	National Register of Historic Places
O	O_3	Ozone
	OARB	Oakland Army Base
	OBRA	Oakland Base Reuse Authority
	OCS	Outer Continental Shelf
	OPA 90	Oil Pollution Act of 1990
	OPR	Office of Planning and Research
	OSC	On-Scene Coordinator

	OSHA	Occupational Safety and Health Administration
	OSPR	Office of Spill Prevention and Response
	OSRO	Oil Spill Response Organization
P	PAH	Polycyclic Aromatic Hydrocarbon
	PAWSA	Ports and Waterways Safety Assessment
	Pb	Lead
	PBDE	Polybrominated Diphenylethers
	PCB	Polychlorinated Biphenyl
	PED	Pre-construction, Engineering and Design
	PG&E	Pacific Gas & Electric
	PGA	Peak Ground Acceleration
	PM	Particulate Matter
	PM_{10}	Particulate Matter with diameter ≤ 10 micrometers (0.0004 inches)
	$PM_{2.5}$	Particulate Matter with diameter ≤ 2.5 micrometers (0.0001 inches)
	POC	Precursor Organic Compounds
	POLA	Port of Los Angeles
	POLB	Port of Long Beach
	PORTS	Physical Oceanographic Real Time System
	POTW	Publicly Owned Treatment Works
	PRC	Public Resources Code
	PTO	Permit to Operate
	PUC	Public Utilities Commission
R	RCA	Root Cause Analysis
	RCRA	Resource Conservation and Recovery Act
	REFEMS	Refinery Emissions Cap
	RMLPS	Richmond Marine-Link Pipeline System
	RMP	Regional Monitoring Program
	RNA	Regulated Navigational Area
	ROC	Reactive Organic Compound
	ROG	Reactive Organic Gases
	RSPA	Research and Special Programs Administration
	RWQCB	Regional Water Quality Control Board
S	SB	Senate Bill
	SCAQMD	South Coast Air Quality Management District
	Se	Selenium
	SFBBP	San Francisco Bay Bar Pilots
	SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
	SFEI	San Francisco Estuary Institute
	Shell	Shell Oil Products US
	SHPO	State Historic Preservation Office
	SIOSC	State Interagency Oil Spill Committee
	SIP	State Implementation Plan
	SJV	San Joaquin Valley
	SJVH	San Joaquin Valley Heavy
	SO_2	Sulfur Dioxide
	SOC	Statement of Overriding Considerations

	SOLAS	Safety of Life at Sea
	SO_X	Sulfur Oxides
	SPCC	Spill Prevention Control and Countermeasure
	SPP	Spill Prevention Plan
	SPT	Standard Penetration Test
	STARs	Spill Team Area Responders
	SWPPP	Storm Water Pollution Prevention Plan
	SWRCB	State Water Resources Control Board
T	TBT	Tributyltin
	TMDL	Total Maximum Daily Load
	TOL	Terminal Operating Limit
	TPIC	Terminal Person in Charge
	TRPH	Total Recoverable Petroleum Hydrocarbons
	TSS	Traffic Separation Scheme
U	UEL	Upper Exposure Limit
	USACE	U.S. Army Corps of Engineers
	USC	United States Code
	USCG	U.S. Coast Guard
	USDA	U.S. Department of Agriculture
	USFWS	U.S. Fish and Wildlife Service
	USGS	U.S. Geological Survey
V	V/C	Volume to Capacity
	VCS	Vapor Control System
	VCU	Vapor Combustion Unit
	VGO	Viscous Gas Oil
	VGP	Vessel General Permit
	VOC	Volatile Organic Compounds
	VPIC	Vessel Person in Charge
	VTC	Vessel Traffic Center
	VTS	Vessel Tracking System
W	WCD	Worst-Case Discharge
	WGCEP	Working Group on California Earthquake Probabilities
	WOR	West of Rockies
	WQC	Water Quality Criteria
	WSA	Wetted Surface Area
	WSPA	Western States Petroleum Association
	WTA	Water Transit Authority
	WTP	Water Treatment Plan
Z	Zn	Zinc

FREQUENTLY USED TERMS RELATED TO MARINE TERMINALS

Ballast/Ballast Water – heavy material placed in the hold of a ship to provide stability.

Barge – any vessel that carries oil in commercial quantities as cargo, but is not equipped with a means of self-propulsion.

Dolphin – a fixed man-made structure that is not connected to shore and is used to berth vessels against (a berthing dolphin) or mooring vessels to (a mooring dolphin).

Marine terminal or Marine Oil Terminal (MOT) – a facility, including a mobile transfer unit, other than a vessel, located on or adjacent to marine waters in California, used for transferring oil to or from tank vessels or barges. The term references all parts of the facility including, but not limited to, structures, equipment and appurtenances thereto used or capable of being used to transfer oil to or from tank vessels or barges. A marine terminal includes all piping not integrally connected to a tank facility. A tank facility means any one or combination of above ground storage tanks, including any piping which is integral to the tank, which contains crude oil or its fractions and which is used by a single business entity at a single location or site.

Nonindigenous species – invasive species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activities dependent on such waters.

Oil – any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues there from, including, but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, aviation fuel, oil sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas.

Operator – when used in connection with vessels, marine terminals, pipelines, or facilities, means any person or entity which owns, has an ownership interest in, charters, leases, rents, operates, participates in the operation of or uses that vessel, terminal, pipeline, or facility. "Operator" does not include any entity which owns the land underlying the terminal or the terminal itself, where the entity is not involved in the operations of the terminal.

Spill or "discharge" – any release of oil into marine waters which is not authorized by any federal, state, or local government entity.

Terminal person in charge" or "TPIC" – an individual designated by the terminal operator as the person in charge of a particular oil transfer operation at a particular terminal.

Transfer – any movement of oil including movements of bunker fuel, between the terminal and the vessel by means of pumping, gravitation or displacement. The term "transfer" also includes those movements of oil to, from or within any part of the terminal or vessel that are directly associated with the movement of oil or bunker fuel between the terminal and the vessel.

Vessel – every description of watercraft or other artificial contrivance, used or capable of being used, as a means of transportation on water and includes, but is not limited to, tank vessels and barges.

Vessel person in charge or "VPIC" – person in charge of a vessel's oil transfer operations.